NOTE FOR HARM REDUCTION AUSTRALIA
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The New Zealand Drug Harm Index 2016

This report is an overview of the recently published New Zealand Drug Harm Index 2016.

Why have a drug harm index?

Drug Harm Indexes have been around since 2002 and have been in practical use in Australia, New Zealand, the United Kingdom and the United Nations Office of Drugs and Crime. They serve three main functions:

- An estimate of the social cost of drug abuse and associated harms.
- A broad means of evaluating the effectiveness of public policy.
- An evaluation method for specific interventions that is comparable across intervention types.

The New Zealand Drug Harm Index (NZDHI) attempts to answer the questions "who bears the burden of drug-related harm" and "what is the economic value of that harm". Where the harm is physical such as absence from work or involvement in crime, it is relatively simple to calculate a dollar equivalent of harm. Where the harm involves pain and suffering, measurement is more contentious. How can one put a dollar value on pain and suffering? The short answer is that economists have developed methods for this purpose. In the end, attempting the difficult task of estimating the value of pain and suffering is preferable to the omission of pain and suffering from our estimates of harm.

How was it done?

The NZDI categorises drug-related costs as personal (falling upon the user), community (borne by the community) and related to various interventions (the things that government and NGOs do to prevent or reduce the harm associated with drug). It was a significant development in the new DHI that intervention costs have been singled out for the first time. Thus drug-related harms comprise both the personal and community harms while the total social cost includes these together with the cost of intervention. The question of how much illicit drug use costs the community is appropriately answered by quoting the total social costs. However, any evaluation of policy and/or interventions should generally be restricted to the calculation of the reduction in personal and community harm.

The Index estimates the total cost of illicit drug use, the cost per kilogram of drug consumed and per drug user. Information was sourced from several New Zealand agencies, primarily from Ministry of Health (in particular, the 2012/13 NZ Health Survey), National Drug Intelligence Bureau & Police. Local and overseas research provided other estimates. Information was sought for 2014 or as near as possible to that date.

It should be noted that the NZDHI is a model of drug harm. It is not an audit exercise of all the drug-related harms occurring in New Zealand. The quality of individual estimates will vary. As such, it is not the final word. It has been designed to be both transparent and modular so that individual estimates can be revised and new overall estimates calculated. It is a living document designed to adapt to the ever-changing nature of illicit drug use and harms. The NZDHI is a high level tool which supplements rather than replaces highly specific studies of drug harms and their mitigation.

NOTE ALL DOLLAR AMOUNTS ARE IN NEW ZEALAND DOLLARS

TOTAL SOCIAL COST	$1.85 Billion
Personal Harms	**$601 million**
Premature death	296
Loss of quality of life	305
Community Harms	**$893 million**
Family and friends	437
Property crime	140
Reinvestment in other crime	70
GST avoided	78
Company tax avoided	167
Intervention costs	**$351 million**

Note: Figures may not add to total due to rounding.

- Total social cost of drug-abuse to the New Zealand economy is estimated at $1.85 billion per year. The cost of intervention was approximately 20% of the total.
- The pain and suffering endured by family and friends was the single largest category of harm ($437 million).
- Drug traffickers do not pay tax on their transactions or profit. The loss to the annual tax revenue in New Zealand is estimated at $245 million.

Drug type	Social cost per dependent user	Social cost per casual user
Methamphetamine	116,600	8,300
Heroin/homebake	104,000	9,300
Pharma-opioids	44,300	3,200
Cocaine	42,300	2,700
Synthetic cannabis	42,000	2,800
Pharma-sedatives	38,200	2,600
Amphetamine	37,500	2,500
Ketamine	32,900	2,500
GHB	32,100	2,600
Pharma-stimulants	31,400	2,200
Cannabis	29,100	2,100
LSD	6,200	2,200
Ecstasy	6,200	400

There were four drugs where harm estimates could be made directly; however, the number of users identified in the Health Survey for many drug types was too few to allow reliable estimates of harm. An indirect method based on an expert panel survey similar to that used by Professor Nutt in the UK was used to estimate these harms.

- As expected, the harms for dependent users were very much greater than that for casual users.
- Methamphetamine was the most harmful drug per dependent user.
- LSD and Ecstasy had the lowest levels of harm per dependent user.

Note that social cost is reported in the above tables. Full details of the results including individual harm estimates can be found at https://www.health.govt.nz/publication/research-report-new-zealand-drug-harm-index-2016 (please download the Word document as some errors have occurred in the conversion to pdf). From my personal perspective, the points that stood out were:

- The prominence of methamphetamine as a source of harm.
- The estimated size of the burden shared by family and friends of illicit drug users. Given the method used was to apply results from a Scandinavian study to the New Zealand population, caution is advised and a local study of this issue recommended.
- The extent of harm associated with diverted drugs (e.g. pharma-opioids and pharma-sedatives).
- Potential for the expert panel approach to quantify the harm for new and emerging drugs. It is intended to establish a permanent expert panel in New Zealand for this purpose.

How is the NZDHI used in evaluating interventions?

The DHI includes two basic measures of social harms.

1. The first, a consumption-based measure, estimates the harm incurred over one year associated with the consumption one kilogram of illicit drug.
2. Estimates of the harm associated with being a dependent and a casual user are also available, equivalent to the harms incurred during one year of dependent or casual use.

Although the type of intervention is quite independent of the measure of social harm, in practice, the consumption based measure will tend to be more useful for law enforcement whereas treatment will tend towards assessing the change in the status of drug users after treatment. Actual evaluations will need to take into account the duration of the impact of interventions.

For example, the seizure by police of 100 kg of leaf cannabis would be estimated to reduce personal and community harm by $NZ 3,500,000 over 12 months. It is probable, however, that the drop in supply could be made good in say three months. The actual reduction in harm attributed to the seizure would should be adjusted to $NZ 875,000 or 25% of the annual harm. Alternatively, one could consider a treatment program that shifted 15 dependent cocaine users to the status of casual users. The estimated harm reduction per year per user is $NZ 39,600. Assume that the treatment has an effective life of say three years. The total harm reduction is 15x39,600x3 (users treated x annual harm reduction x the effective life of the treatment) or $NZ 1,782,000. It should be noted that even these calculations are simplistic. Each evaluation requires its own detailed planning and the DHI is one tool among several available to researchers. More detail is to be found in *A Guide to the Practical Application of the New Zealand Drug Harm Index 2016* at the website noted earlier in this paper.